U.S.Application No.: 10/722,553

## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in

the application:

## **Listing of Claims:**

1. (currently amended) A photothermographic material comprising, on a same surface of a substrate, a photosensitive silver halide, a non-photosensitive organic silver salt, a reducing agent, a development accelerator, and a binder, wherein said binder is dispersed as a latex and the material comprising comprises, as said binder, a polymer formed by copolymerizing a monomer represented by the following general formula (M) in an amount from 10 to 70 mass%:

General formula (M)

$$CH_2 = CR^{01} - CR^{02} = CH_2$$

wherein in general formula (M),  $R^{01}$  represents a hydrogen atom, an alkyl group having 1 to 6 carbon atoms, a halogen atom, or a cyano group; and  $R^{02}$  represents an alkyl group having 1 to 6 carbon atoms, a halogen atom or a cyano group,  $R^{01}$  and  $R^{02}$  each being selected from the group consisting of a hydrogen atom, an alkyl group having 1 to 6 carbon atoms, a halogen atom, and a cyano group, provided that both  $R^{01}$  and  $R^{02}$  are not hydrogen atoms at the same time.

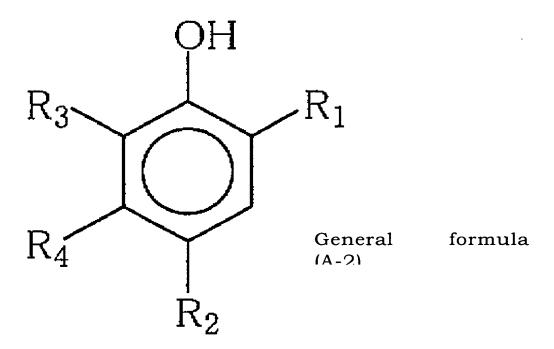
2. (original) A photothermographic material according to claim 1, wherein said development accelerator is a compound selected from compounds represented by the following general formula (A-1):

General formula (A-1):

## Q<sub>1</sub>-NHNH-Q<sub>2</sub>

wherein in general formula (A-1),  $Q_1$  represents an aromatic group or a heterocyclic group bonded by a carbon atom thereof to -NHNH- $Q_2$ ; and  $Q_2$  represents a carbamoyl group, an acyl group, an alkoxycarbonyl group, an aryloxycarbonyl group, a sulfamoyl group.

3. (original) A photothermographic material according to claim 1, wherein said development accelerator is a compound selected from compounds represented by the following general formula (A-2):



wherein in general formula (A-2), R<sub>1</sub> represents an alkyl group, an acyl group, an acylamino group, a sulfonamide group, an alkoxycarbonyl group, or a carbamoyl group; R<sub>2</sub> represents a hydrogen atom, a halogen atom, an alkyl group, an alkoxy group, an aryloxy group, an alkylthio group, an arylthio group, an acyloxy group or a carbonate ester group; and R<sub>3</sub> and R<sub>4</sub> each independently represent a group that can substitute the benzene ring and may be mutually bonded to form a condensed ring.

- 4. (original) A photothermographic material according to claim 1, wherein said non-photosensitive organic silver salt is an organic acid silver salt with a content of silver behenate equal to or higher than 90 mol.%.
- 5. (original) A photothermographic material according to claim 1, wherein said non-photosensitive organic silver salt is an organic acid silver salt with a content of silver behenate equal to or higher than 95 mol.%.
- 6. (original) A photothermographic material according to claim 1, wherein said polymer has a glass transition temperature within a range from

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-30° to 70°C.

- 7. (original) A photothermographic material according to claim 1, wherein said polymer has a glass transition temperature within a range from -10° to 35°C.
- 8. (original) A photothermographic material according to claim 1, wherein said reducing agent is a compound represented by the following general formula (R):

General formula (R)

wherein in general formula (R),  $R^{11}$  and  $R^{11}$  each independently represent an alkyl group having 1 to 20 carbon atoms;  $R^{12}$  and  $R^{12}$  each independently represent a hydrogen atom or a substituent that can substitute the benzene ring; L represents an -S- group or a -CHR<sup>13</sup>- group;  $R^{13}$  represents a hydrogen atom or an alkyl group having 1 to 20 carbon atoms; and  $X^1$  and  $X^1$  each independently represent a hydrogen atom or a group that can substitute the benzene ring.

9. (original) A photothermographic material according to claim 8, wherein, in the reducing agent represented by general formula (R), R<sup>11</sup> and

R<sup>11</sup> each independently represent a secondary or tertiary alkyl group having 3 to 15 carbon atoms.

- 10. (original) A photothermographic material according to claim 1, further comprising a phthalocyanine dye.
- 11. (original) A photothermographic material according to claim 1, wherein in general formula (M), R<sup>01</sup> is a hydrogen atom and R<sup>02</sup> is a methyl group.
- 12. (original) A photothermographic material according to claim 1, wherein said polymer is formed by copolymerizing a monomer having an acid group in an amount from 1 to 20 mass%.
- 13. (original) A photothermographic material comprising, on a same surface of a substrate, a photosensitive silver halide, a non-photosensitive organic silver salt, a reducing agent and a binder, the material comprising, as said binder, a polymer latex formed by copolymerizing a monomer represented by the following general formula (M) in an amount from 10 to 70 mass% and having a number-averaged particle size (dn) from 30 to 500 nm:

General formula (M)

$$CH_2 = CR^{01} - CR^{02} = CH_2$$

wherein in general formula (M), R<sup>01</sup> represents a hydrogen atom, an alkyl group having 1 to 6 carbon atoms, a halogen atom, or a cyano group; and R<sup>02</sup> represents an alkyl group having 1 to 6 carbon atoms, a halogen atom or a cyano group, R<sup>01</sup> and R<sup>02</sup> each being selected from the group consisting of a hydrogen atom, an alkyl group having 1 to 6 carbon atoms, a halogen atom, and a cyano group, provided that both R<sup>01</sup> and R<sup>02</sup> are not hydrogen atoms at the same time.

- 14. (original) A photothermographic material according to claim 13, wherein the polymer latex has a ratio (dv/dn) of a volume-weighted average particle size (dv) to a number-averaged particle size (dn) within a range from 1.00 to 1.10.
- 15. (original) A photothermographic material according to claim 13, wherein the polymer latex contains halogen ions in an amount of 500 ppm or less with respect to the latex.

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16. (original) A photothermographic material comprising, on a same surface of a substrate, a photosensitive silver halide, a non-photosensitive organic silver salt, a reducing agent and a binder, the material comprising, as said binder, a polymer latex formed by copolymerizing a monomer represented by the following general formula (M) in an amount from 10 to 70 mass%, and emulsion polymerized with a peroxide as a polymerization initiator in an amount of 0.3 to 2 mass% with respect to the monomer:

General formula (M)

$$CH_2 = CR^{01} - CR^{02} = CH_2$$

wherein in general formula (M),  $R^{01}$  represents a hydrogen atom, an alkyl group having 1 to 6 carbon atoms, a halogen atom, or a cyano group; and  $R^{02}$  represents an alkyl group having 1 to 6 carbon atoms, a halogen atom or a cyano group,  $R^{01}$  and  $R^{02}$  each being selected from the group consisting of a hydrogen atom, an alkyl group having 1 to 6 carbon atoms, a halogen atom, and a cyano group, provided that both  $R^{01}$  and  $R^{02}$  are not hydrogen atoms at the same time.

- 17. (original) A photothermographic material according to claim 16, wherein said polymer latex includes halogen ions in an amount of 500 ppm or less with respect to the latex.
- 18. (original) A photothermographic material according to claim 13, wherein said polymer latex has a glass transition temperature within a range from -30° to 70°C.
- 19. (original) A photothermographic material according to claim 13, wherein, in said general formula (M),  $R^{01}$  is a hydrogen atom and  $R^{02}$  is a methyl group.
- 20. (original) A photothermographic material according to claim 13, wherein said polymer is formed by copolymerizing a monomer having an acid group in an amount from 1 to 20 mass%.
- 21. (original) A photothermographic material according to claim 13, comprising halogen ions in an amount of 1000 ppm or less with respect to the organic silver salt.